

## REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Applicants appreciate the courtesies shown to Applicants' representative by Examiners Robinson and Speer during the October 26, 2010 personal interview. The reasons warranting favorable action discussed during the interview are incorporated into the following remarks and constitute Applicants' separate record of the interview.

Claims 11, 35-37, 39-50, 53-63, 65 and 68-73 are pending in this application. Claims 11, 35 and 36 are the only independent claims. By this Amendment, Claims 11 and 35 are amended and Claim 64 is canceled without prejudice. As discussed during the interview, support for the amendment to Claims 11 and 35 can be found, for example, on page 9, lines 9-11 and page 20, line 7 of the specification. No new matter is added.

The Official Action rejects Claims 37, 64 and 65 under 35 U.S.C. §112, second paragraph. The rejection with respect to canceled Claim 64 is moot. The rejection involving Claims 37 and 65 is respectfully traversed.

The Official Action takes the position that Claims 37 and 65 fail to further define the scope of independent Claims 11 and 35, respectively. This position is based on the belief that the recited characteristics of the ply of glass defined in Claim 37 apply to both of the plies of glass recited in independent Claim 11, and thus conflict with the Claim 11 characteristics. In addition, the Official Action believes that the recited characteristics of the glass ply defined in Claim 65 apply to both of the glass plies recited in independent Claim 35, and therefore conflict with the Claim 35 characteristics. However, as explained during the interview, independent Claim 11

refers to "at least one ply of glass" and Claim 37 defines "the other ply". Similarly, independent Claim 35 refers to "at least one ply of glass" and Claim 65 defines "the other ply of glass". That is, independent Claims 11 and 35 define specific characteristics of one ply of glass and Claims 37 and 65 define characteristics of the other ply of glass. Accordingly, Claims 37 and 65 further define the scope of independent Claims 11 and 35, respectively. As discussed during the interview, Claims 37 and 65 thus do not conflict with Claims 11 and 35, and are not indefinite. Withdrawal of the rejection is respectfully requested.

The Official Action rejects independent Claim 36 under 35 U.S.C. §103(a) in view of U.S. Patent No. 6,446,402 to Byker et al. ("Byker"). The rejection is respectfully traversed.

Independent Claim 36 is directed to a laminated glazing comprising, *inter alia*, an interlayer material tinted to have a visible light transmission of 35 % or less at a thickness of 0.76 mm.

Byker discloses in lines 60-63 of column 18 that its thermochromic layer may absorb from a few percent up to about 50% or more of the visible and/or NIR light available in sunlight. In view of this passage, the Official Action maintains that whatever light is not absorbed by the thermochromic layer is transmitted, such that the thermochromic layer *transmits* anywhere from almost all to less than 50% of the visible and/or NIR light. The Official Action takes the position that transmitting "less than 50%" of the visible and/or NIR light may overlap the claimed transmission range of 35% or less. In this regard, the Official Action says one skilled in the art could have arrived at the claimed transmission range of 35% or less through routine experimentation. For example, the Official Action believes it would have been obvious to adjust Byker's transmission of "less than 50%" of the visible and/or NIR

light to be in the claimed range by "optimizing" to achieve "desired results" (see the paragraph bridging pages 5 and 6 of the Official Action). Applicants disagree with this position for various reasons.

First, as discussed during the interview, there is insufficient evidence of record supporting the conclusion that it would have to modify Byker's visible and/or NIR light transmission of "less than 50%" to be within the claimed range of 35% or less. According to the Patent Office's Examination Guidelines for Determining Obviousness Under 35 U.S.C. §103(a) in view of *KSR International Co. v. Teleflex Inc.*, the Examiner should clearly articulate why the claimed invention would have been obvious. For example, the Supreme Court in *KSR* held that the Examiner "must [provide] some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" (*KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). As discussed during the interview, it is not at all apparent here *why* one skilled in the art would have considered the claimed range "optimal". Equally unclear is what particular "desired results" would have led one skilled in the art to the claimed range. And, the Official Action does not provide evidence establishing that the claimed range is the "optimum" range for achieving those unspecified "desired results". Simply because something could have been modified and a person of ordinary skill was capable of making the modification does not mean it would have been obvious to do so. Thus, there is inadequate evidence supporting the conclusion that it would have to modify Byker's visible and/or NIR light transmission of "less than 50%" to be as low as the claimed 35% or less.

Moreover, one skilled in the art considering Byker's disclosure *as a whole*, as required by the MPEP §2141.02, would not have desired to modify Byker's visible and/or NIR light transmission of "less than 50%" to be within the claimed range of

35% or less. As discussed during the interview, the claimed range is too small for the intended purpose of Byker's window.

In particular, Byker's invention is directed to a thermochromic window that allows sunlight or solar radiation into a building when the ambient temperature is low, and that substantially blocks solar radiation when the ambient temperature is high (see col., lines 38-43 of Byker). Thus, the window allows passive solar heating and daylighting on colder days and still provides significant daylighting while blocking solar heat build-up on warmer days (see col., lines 43-47 of Byker). Therefore, Byker's window has visible light transmission characteristic that allows solar heating and daylighting on colder days.

As discussed during the interview, however, the claimed visible light transmission range of 35% or less would not allow sufficient daylight into the window when the ambient temperature is low. This is evident from Byker's disclosure in lines 1-5 of column 19 where Byker states that the static light energy absorbing material is present at a level or concentration such that the total residual light energy absorbing character results in about 10% to about 50% of the total sunlight energy incident on the window being absorbed (i.e., **50% to 90%** of the total sunlight energy being **transmitted**). That is, "about 50%" is the maximum level of incident sunlight energy to be absorbed by the static light absorbing material. In this regard, when Byker states at lines 60-63 of column 18 that the static light absorbing material may absorb "from a few percent to about 50 percent or more" of incident light, Byker is only referring to a few percent more than 50%, and not another 15% as would be necessary to arrive at the claimed transmission range. Accordingly, and as discussed during the interview, modifying Byker's window so that the visible and/or NIR light transmission of "less than 50%" is within the claimed range of 35% or less

would go against Byker's teaching of allowing solar heating and daylighting to be transmitted through the window on colder days. In view of the above, one skilled in the art reading Byker's disclosure would understand the Byker does not envision or suggest an interlayer material tinted to exhibit a visible light transmission of 35% or less at a thickness of 0.76 mm as recited in independent Claim 36.

Further, independent Claim 36 recites a visible light transmission range that is narrower than the range disclosed by Byker. According to the MPEP, if claims define a narrow range, and the reference teaches a broader range, it may be reasonable to conclude that the narrow range is not disclosed with sufficient specificity to constitute an anticipation of the claims (see MPEP §2131.03(II), citing *Atofina v. Great Lakes Chem. Corp*, 441 F.3d 991, 999 (Fed. Cir. 2006)). Further, any evidence of unexpected results within the narrow range may also render the claims unobvious (see MPEP §2131.03(III)). Applicants can rebut a *prima facie* case of obviousness based on overlapping ranges by showing advantages associated with the claimed range (see MPEP §2144.05(III)). Here, as a result of the claimed lower visible light transmission range, tinted glass is not required. This laminated glazing is able to rely solely on the interlayer to restrict the light transmission for privacy or solar control reasons. As such, laminating facilities are able to manufacture a wider range of laminated products by using a variety of different interlayer materials and/or simply using clear glass to form the laminate. Byker fails to disclose the claimed range and the resulting benefits.

Thus, Claim 36 is patentable over Byker for at least the above reasons.

The Official Action next rejects independent Claims 11 and 35 under 35 U.S.C. §103(a) in view of Byker and U.S. Patent Application Publication No. 2002/0025899 A1 to Higby et al. ("Higby").

As discussed during the interview, independent Claims 11 and 35 are each amended to recite that the laminated glazing comprising, *inter alia*, at least one ply of body-tinted glass comprising a colourant portion including **0.9 to 4.0 %** (by weight of the glass) of total iron (calculated as  $\text{Fe}_2\text{O}_3$ ).

The Official Action acknowledges that Byker fails to disclose these features, but takes the position that they are disclosed by Higby. To support this position, the Official Action refers to Higby's disclosure in lines 5-7 of paragraph [0018] stating that the total amount of iron is from 0.3% to "about" 0.7% total iron. The Official Action states that Higby's disclosure of "about" 0.7% allows for values slightly higher than 0.7% total iron calculated as  $\text{Fe}_2\text{O}_3$ .

However, as discussed during the interview, the amount of total iron disclosed by Higby is a relatively small range of 0.4% (i.e., from 0.3% to 0.7%). Increasing the amount of total iron to 0.9% would increase Higby's overall range by 50%. One skilled in the art reading Higby's disclosure would not interpret the range upper limit of "about" 0.7% to encompass values 50% larger than the disclosed range. To say the term "about" includes values 50% higher than the disclosed range is not supported by Higby. Moreover, one skilled in the art would not have desired to modify Higby's amount of iron  $\text{Fe}_2\text{O}_3$  by weight to be more than 0.7% because doing so would appear to reduce the visible light transmission below the threshold of at least 70 percent (see Abstract and paragraph [0006] of Higby).

Thus, independent Claims 11 and 35 are patentable over the combination of Byker and Higby for at least these reasons.

Dependent Claims 37, 39-50, 53-63, 65 and 68-70 are patentable over the applied references at least by virtue of their respective dependence from the patentable independent claims. Thus, a detailed discussion of the additional

distinguishing features recited in these dependent claims is not set forth at this time.

Withdrawal of the rejections is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

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